6mmL Chip Type, Wide Temperature Range series



- Chip type with load life 2000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

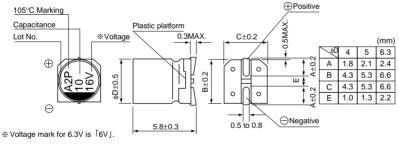




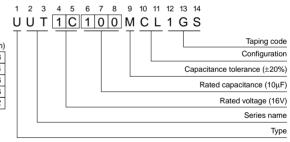
■ Specifications

| | | | | | | _ | | | | | | | |
|---------------------------------------|---|--|--------|----|------|--|---|---|----------------|-------------|--|---|--|
| Item | Performance Characteristics | | | | | | | | | | | | |
| Category Temperature Range | −55 to +105°C | | | | | | | | | | | | |
| Rated Voltage Range | 4 to 50V | | | | | | | | | | | | |
| Rated Capacitance Range | 0.1 to 100µF | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | | | | | | |
| Leakage Current | After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (µA) , whichever is greater. | | | | | | | | | | | | |
| | Measurement frequency :120Hz at 20°C | | | | | | | | | | | | |
| Tangent of loss angle (tan δ) | Rated voltage (V) | 4 | 6.3 | | 10 | 16 | 2 | 5 | 3 | 5 | 50 | | |
| | tan δ (MAX.) | 0.37 | 0.28 | 3 | 0.24 | 0.20 | 0. | 16 | 0. | 13 | 0.12 | | |
| | Measurement frequency :120Hz | | | | | | | | | | | | |
| O(1) 177 - 11 - T | Rated voltage (V) | | | 4 | 6.3 | 10 | 16 | 2 | 25 | 35 | 50 |] | |
| Stability at Low Temperature | Impedance ratio | Z-25°C / Z | Z+20°C | 6 | 3 | 3 | 2 | - : | 2 | 2 | 2 |] | |
| | ZT / Z20 (MAX.) | Z-40°C / Z | Z+20°C | 12 | 8 | 5 | 4 | _ ; | 3 | 3 | 3 | | |
| | The specifications listed at right shall be met Capacitance | | | | | | | Within ±25% of the initial capacitance value (16V or less) | | | | | |
| E. L | when the capacitors | char | change | | | Within ±20% of the initial capacitance value (25V or more) | | | | | | | |
| Endurance | the rated voltage is applied for 2000 hours at | | | | | 5 | 200% or less than the initial specified value | | | | | | |
| | 105°C. Leakage current Less than or equal to the initial spe | | | | | | | | e initial spec | ified value | | | |
| Shelf Life | | | | | | | | | | | | nent based on JIS C 5101-4 | |
| | · · · · · · · · · · · · · · · · · · · | clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above. | | | | | | | | | | | |
| Resistance to soldering | The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. | | | | | | | | | | Within ±10% of the initial capacitance value | | |
| heat | | | | | | | | | | | | Less than or equal to the initial specified value | |
| | | | | | | | | Leakage current Less than or equal to the initial specified value | | | | | |
| Marking | Black print on the ca | ase top. | | | | | | | | | | | |

■Chip Type



Type numbering system (Example: 16V 10µF)



■Dimensions

| | V | 4 | ļ | 6.3 | 3 | 10 |) | 10 | 6 | 2 | 5 | 35 | 5 | 50 |) |
|----------|------|-----|--------|-----|--------|-----|--------|-----|----|-----|----------|-----|----|-----------|--------|
| Cap.(µF) | Code | 00 | 3 | 0. | J | 1/ | 4 | 10 | 3 | 11 | = | 1\ | V | 1⊦ | l |
| 0.1 | 0R1 | | | | ! | | | | | | | | | 4 | 1.0 |
| 0.22 | R22 | | i | | i I | | i I | | i | | i | | i | 4 | 2.6 |
| 0.33 | R33 | | ! | | ! | | ! | | ! | | ! | | ! | 4 | 3.2 |
| 0.47 | R47 | | | | i | | | | | | | | | 4 | 3.8 |
| 1 | 010 | | ! ! | | ! | | ! ! | | ! | | ! ! | | | 4 | 6.2 |
| 2.2 | 2R2 | | | | | | | | | | | | | 4 | 11 |
| 3.3 | 3R3 | | | | i I | | İ | | | | | | | 4 | 14 |
| 4.7 | 4R7 | | | | ! | | | | | 4 | 13 | 4 | 15 | 5 | 19 |
| 10 | 100 | | i | | İ | | i I | 4 | 18 | 5 | 23 | 5 | 25 | 6.3 | 30 |
| 22 | 220 | 4 | 22 | 4 | 22 | 5 | 27 | 5 | 30 | 6.3 | 38 | 6.3 | 42 | | |
| 33 | 330 | 5 | 30 | 5 | 30 | 5 | 35 | 6.3 | 40 | 6.3 | 48 | | | | |
| 47 | 470 | 5 | 36 | 5 | 36 | 6.3 | 46 | 6.3 | 50 | | ! | | ! | | Rated |
| 100 | 101 | 6.3 | 60 | 6.3 | 60 | 6.3 | 60 | | | | | | | Case size | ripple |

Rated ripple current (mArms) at 105°C 120Hz

• Frequency coefficient of rated ripple current

| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|-------------|-------|--------|--------|-------|----------------|
| Coefficient | 0.70 | 1.00 | 1.17 | 1.36 | 1.50 |

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UX(p.158), UJ(p.164) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.